

15 (1889); Diels & Pritzel in Bot. Jahrb. Syst. 35: 330 (1904); Gardner, Enum. Pl. Austral. Occ.: 71 (1930); Blackall & Grieve, Western Austral. Wildflowers 1: 260 (1954); Beard, W. Austral. Pl.: 56 (1965).

HOLOTYPE: King Georges Sound [Western Australia], (*Hügel*), not examined. I have seen the Preiss specimen, 1326 (MEL 1007979), which was compared (as noted on the sheet) with Hügel's specimen by Steetz.

SYNONYMY: *Tetratheca setigera* var. *elongata* Steetz in Lehmann, Pl. Preiss. 1: 215 (1845); Walpers, Repert. Bot. Syst. 5: 68 (1845); Turezaninow in Bull. Soc. Imper. Nat. Moscou 25: 141 (1852) 'T. strigosae' var. *elongata*; Steetz, Familie Tremandreen: 10 (1853). **HOLOTYPE:** In subarenosis sylvae ad fluvium "Canning River" (Perth) in Nova Hollandia occidentali, Preiss 1322, 9.1841 (MEL 1007980, 1007981, 1007982).

Tetratheca elongata (Steetz) Schuehardt, Syn. Tremandr.: 38 (1853) but, apparently by an unfortunate error, he refers to the basionym as '*Tetratheca setigera* Lindl. β *setigera* Steetz'. **HOLOTYPE:** As for *T. setigera* var. *elongata*.

An erect or diffuse shrub to 60 cm in height with numerous stems arising from a branched woody stock and branching in the upper part. *Stems* terete, usually covered with well-separated brown setae to 2.5 mm in length with swollen bases and often with fine, white, curved or curled, spreading hairs between them (fig. 1), the setae usually much more dense and reddish-coloured on young growth, the stems 0.5-1.2 mm broad in the flowering region, the branching alternate but occasionally with several branches arising together. *Leaves* alternate, rarely a few opposite, broadly elliptical to linear, occasionally a little wider above or below the centre, from less than 5 mm to more than 20 mm in length, the apex incurved, with a short spiny point, the margins recurved or revolute and somewhat undulate or almost dentate owing to long, stiff, broad-based, coloured setae, or at least their bases, on the outer part of the upper surface, the upper surface dark, coriaceous, with scattered, short, white, stiff, usually curved hairs especially on the midrib, the lower surface paler with stiff hairs especially on the midrib or almost glabrous, the petiole short. *Flowers* occurring singly in the axils of upper leaves, the bracts c. 1 mm long, linear, dark brown and hairy at least on the upper surface. *Peduncles* 5-18 mm long, usually dark-coloured, glabrous or with a few to many stiff, broad-based, coloured antorse setae to 1.5 or 2 mm in length, occasionally with a small glandular tip, on the upper part, the peduncle thickened and often angled in the upper part to form a receptacle 1.5 mm in diameter. *Calyx-segments* usually 5, deciduous, usually dark-coloured, 2.5-3.5 mm long, elliptical, obtuse or acute, glabrous or with broad-based setae to 1.5 or even 2 mm in length and sometimes with a small glandular tip, and with at least a few hairs on the inner surface near the margin, the thick base of each segment attached well inside the edge of the receptacle and folded back over it with a very thick, turgid ridge across the lower back. *Petals* 5, dark pink, broadly linguiform or obovate, rarely narrowly linguiform, 8-12 mm long and usually $\frac{1}{2}$ or less than $\frac{1}{2}$ as wide with the greatest width above the centre, usually in the upper $\frac{2}{3}$, deciduous. *Stamens* usually 10, 3-4 mm long; filament short, c. 0.25 mm in length, and flattened and merging into the lower curved body of the anther; the body of the anther c. 1.5 (-2) mm, dark purple to reddish brown, shining and smooth, occasionally with a few hairs, abruptly or gradually contracting into the anther-tube; anther-tube narrow, often yellow, c. 1.5 mm long but occasionally shorter, with a slightly oblique orifice. *Ovary* glabrous, or with a few hairs near the apex and hairs on the inner surface, on a conspicuous, very swollen, spongy, translucent base and tapering at the apex to a rather thick, glabrous style 1.5-2 mm long. *Ovules* 2, 1 in each loculus, attached to the upper part or centre of the central axis at a conspicuous swollen placenta apparently covered with minute shining hairs (fig. 5). *Fruit* not seen in mature condition.

DISTRIBUTION: In sclerophyll scrub and forest on light soil in SW. Western Australia. Map 6, see p. 180.

SPECIMENS EXAMINED (SELECTION ONLY): WESTERN AUSTRALIA: Irwin District: Geraldton, Lucas NSW 125060, 7.1928 (NSW). Darling District: Swan R, Helmich (MEL); Darling Range, Hotchkiss & Eames NSW 125070, 9.1953 (NSW); in subarenosis sylvae ad fluvium "Canning River", Preiss 1322, 9.1841 (MEL 1007980, 1007981, 1007982); Dwellingup, Garduer 10.1938 (PERTH); Harvey R, Oldfield (MEL). Warren District: Cape Naturaliste, Wiburd NSW 125059, 9.1904 (NSW); Upper Capel, Sargent 10.1921 (PERTH); Busselton, McHard 10.1884

(MEL); 4 miles [6 km] S. of Yallingup, *Common* 0386, 10.1951 (CANB); Kirrup, *Koch* 2064, 10.1910 (BRI); between Busselton and Nannup, *Went* 80, 9.1962 (PERTH); 8 miles [13 km] from Nannup towards Northcliffe, *Phillips* 10.1962 (CBG 010654); Blackwood, *Oldfield* 202 (MEL); Cape Leeuwin, *McHard*, 3.1885 (MEL 1008221); Big Brook, *Koch* 2354, 10.—(BRI); Pemberton, *Koch* 2646, 11.1921 (MEL); Thompson road, about 24 miles [38 km] N. of Walpole, *Belcher* 393, 10.1967 (CBG, MEL, NSW, PERTH); c. 8 miles [13 km] S. of Mt Barker, *Eichler* 15999, 9.1959 (AD); near Mt Many Peaks, *Galbraith* (MEL); "Monliup", 25 miles [40 km] E. of Albany, *Elder* NSW 125064, 7.1930 (NSW); Bald Island (MEL 1008007); Albany, *Helmis* 12.1898 (NSW 125055, PERTH); Albany, *Mueller* 9.1867 (MEL 1007986); in solo turfososoarenoso inter frutices densos ad "Stirlings terrace" (Planta genet), *Preiss* 1326, 9.1840 (MEL); King Georges Sound, *Brown* 1801 (MEL); King Georges Sound, *Menzel* 29, 9.1895 (AD, NSW); *Goadby* 115, 9.1901 (PERTH). Stirling District: Tambellup, *Pulleine* NSW 125058, 11.1918 (NSW); Bremer R., *Webb* 1884 (MEL 1008002, 1008017, 1008225).

Blackall & Grieve, Western Austral. Wildflowers 1: 260 (1954), key out a "*T. setigera* var. *hispidissima*" without author. There is no indication that it is based on *T. hispidissima* Steetz which bears no close similarity to *T. setigera*.

This species has stems which are covered with long setae and it usually has conspicuous antrorse setae on the peduncles. *T. hirsuta* and *T. hispidissima* may also have dense setae on the stems but they can always be readily distinguished by their extremely long tapering tuberculate anther-tubes.

MAP 6



21. *Tetratheca confertifolia* Steetz in Lehmann, Pl. Preiss. 1: 214 (1845); Walpers, Repert. Bot. Syst. 5: 68 (1845); Steetz, Familie Tremandreen: 10 (1853); Schuchardt, Syn. Tremandr. : 23 (1853); Bentham, Fl. Austral. 1: 133 (1863); F. Mueller, Fragm. 12: 6 (1882); F. Mueller, Syst. Census Austral. Pl. 1: 9 (1882); F. Mueller, Second Syst. Census 1: 15 (1889); Diels & Pritzel in Bot. Jahrb. Syst. 35: 30 (1904); Gardner, Enum. Pl. Austral. Occ.: 71 (1930); Blackall & Grieve, Western Austral. Wildflowers 1: 260 (1954); Beard, W. Austral. Pl. : 56 (1965).

SYNTYPES: In confragosis montium continuorum "Darlings range" (Perth) in Nova Hollandia occidentali, Preiss 1328, 1.x.1839 (MEL 1007730, annotated by Steetz; MEL 1007729); in regionibus interioribus Novae Hollandiae meridionali-occidentalis, Preiss (? an Drummond ?), Preiss 1329 (MEL 1007731, annotated by Steetz).

A small shrub to 20 cm in height with numerous, sparsely branched, erect or spreading stems arising from a stout, branched, woody, perhaps rhizomatous stock. *Stems* terete, covered with white, curved, antorse hairs, some stouter than others, the hairs dense on the upper branches, the stems 0·5–1·0 mm broad in the flowering region, the branches alternate but with several arising close together so as to appear whorled. *Leaves* alternate, very close together on the upper branches, the majority c. 5 mm in length, linear, obtuse, somewhat incurved at the tip, the margins strongly revolute, the upper surface covered with short and long, stiff, white hairs, occasionally with glandular tips, the lower surface pubescent but scarcely visible, the petiole short but distinct. *Flowers* occurring singly in the axils of upper leaves and without bracts. *Peduncles* elongating as the flower matures, 15–40 mm long, pale or dark-coloured, with dense, curved, antorse setae of varying lengths up to 0·5 mm, and occasionally spreading, broad-based pale or dark-stemmed, red-tipped glandular hairs to 0·5 mm in length, the top often curved, broadening to a receptacle little more than 1 mm in diameter; often swollen at the extreme base. *Calyx-segments* 5, deciduous, pale or dark, narrowly ovate or deltoid, acute to long-acuminate, 3·5–5 mm long, with dense or sparse, shining antorse setae and some scattered glandular hairs, the inner surface covered with long dense fine hairs, the base of each segment unthickened except perhaps on a central ridge but strongly curved back over the edge of the receptacle. *Petals* 5, dark pink, occasionally white, rarely varying on one plant, usually broadly linguiform, 8–11 mm long and a little more than $\frac{1}{2}$ as wide with the greatest width above the centre and often very near the apex, deciduous. *Stamens* usually 10, 3·5–4 mm long; filament very short, 0·25 mm long, leaning back over the base of the petal and merging into the body of the anther; body of the anther narrowed at the base and strongly curved or angled above this, purple, shining and smooth or hairy especially near the base, 2 mm long, tapering to the anther-tube; anther-tube rather broad, curved, 1·5 mm long with an oblique orifice (fig. 4). *Ovary* densely pubescent and with glandular hairs, sessile, the style 2·5 mm long. *Ovules* 2, 1 in each loculus, attached to the upper part of the central axis. *Fruit* cuneate-oblong to obovate, to 9 mm in length, and to 5 mm in width near the top, pubescent, the seeds leaving no thickening on the placenta. *Seeds* 4 mm long, light-brown, cylindrical, rounded at the base, truncate at the apex, with a scar on the adaxial surface and a narrow pale ridge extending to the apex from it, covered with sparse very fine spreading hairs, the appendage cream, loosely coiled towards the axis, with sparse fine hairs.

DISTRIBUTION: In sclerophyll scrub on light soils on sandplain and gravel, in SW. Western Australia. Map 6, see p. 180.

SPECIMENS EXAMINED (SELECTION ONLY): WESTERN AUSTRALIA: Irwin District: Howathara, Moresby Range, Burns 1036, 8.1966 (PERTH); between the rivers Murchison and Irwin, Sewell (MEL); 27 miles [43 km] SE. of Walkaway, George 7848, 9.1966 (PERTH, NSW); Three Springs, Blackall 4434, 8.1940 (PERTH); 3 N. of Cockleshell road junction and c. 114 N. of Gin Gin, Vasek 681009–63, 10.1968 (CANB). North Avon and Darling Districts: W. of Watheroo, halfway to Badgingarra, Ashby 1928, 9.1966 (AD); 2 miles [3 km] NW. of Badgingarra, Gitins 1716, 9.1967 (BRI, NSW, PERTH); road to Jurien Bay from Moora, Clyne NSW 125049, 9.1969 (NSW); Moora, Ashby 66, 9.1946 (PERTH); Wongan Hills, 5 miles [8 km] NW. of Wongan Hills township, Willis 9.1963 (MEL); Gillingarra, in fructicetis Moore R., Pritzel 727, 10.1901 (AD, NSW, PERTH); E. of New Norcia, Hill 1442, 10.1964 (AD); Bindoon, Gardner 7699, 10.1945 (PERTH); Wooroloo, Koch 1542, 9.1906 (MEL, NSW); in confragosis montium

continuum Darlings range, *Preiss* 1328, 11.1839 (MEL 1007729, 1007730). Stirling District: Towards the Tone R, *Muir* 1880 (MEL); 3 miles [5 km] N. of Needilup, *Newbey* 1874, 12.1965 (PERTH). Eyre District: 10 miles [16 km] from Jerramungup towards Ravensthorpe, *Wrigley* NSW 114881, 10.1968 (NSW). Without precise locality: In regionibus interioribus Novae Hollandiae meridionali-occidentalis, *Preiss* 1329 (MEL 1007731); Western Australia, *Drummond* 100 (MEL), *Drummond* (MEL 1007727, 1007728).

This species can be immediately recognized by its crowded leaves, long peduncles and long narrow calyx-segments. It appears to have some affinity with *T. filiformis* in spite of its different appearance (see note under that species).

22. *Tetratheca filiformis* Benth., Fl. Austral. 1: 135 (1863); F. Mueller, Fragm. 12: 8 (1882); F. Mueller, Syst. Census Austral. Pl. I: 9 (1882); F. Mueller, Second Syst. Census 1: 15 (1889); Gardner, Enum. Pl. Austral. Occ.: 71 (1930); Blackall & Grieve, Western Austral. Wildflowers 1: 260 (1954); Beard, W. Austral. Pl.: 56 (1965).

SYNTYPES: On the Franklin R [Western Australia], *Maxwell* (MEL 1007789); Swan River, *Drummond*, Coll. 1843, n. 197 (MEL 1007791 is probably a duplicate); Swan River, *Drummond*, Coll. 1843, n. 181 (I have not seen this specimen).

A diffuse shrub with slender trailing stems to 40 cm in length arising from a rather slender, perhaps rhizomatous, woody stock and branching above but near the stock. *Stems* very slender, terete but swollen below the nodes and somewhat longitudinally ridged, glabrous or more frequently with areas of short, fine, curled, mostly retrorse hairs and often scattered longer straight hairs or a few stout dark-tipped hairs below the nodes, the stems 0.1–0.4 mm broad in the flowering region, the branching alternate and at an acute angle. *Leaves* in whorls of 3 or occasionally opposite, ovate to narrowly lanceolate or narrowly elliptical, from less than 5 to almost 20 mm in length, the apex with a straight point, the margins flat, recurved or revolute at the edges, entire or with an occasional spiny tooth or dentate with the teeth spiny, the upper surface with scattered white hairs, the lower much paler and glabrous or with scattered white hairs, the petioles distinct. *Flowers* occurring singly in the axils of upper leaves and without bracts. *Peduncles* elongating as the flower matures, 15 to more than 50 mm in length, slender, pale, with sparse or numerous short, fine, curled hairs, occasionally some longer or straight near the top but still less than 0.5 mm in length, or with areas of coloured long glandular-tipped hairs, enlarging somewhat at the top of form a receptacle less than 1 mm in diameter; often swollen at the extreme base. *Calyx-segments* 5, deciduous, often rather dark-coloured, 1.5–2 mm long, broadly ovate, acuminate, glabrous or with short, irregularly directed, rather curved hairs, often with occasional broad-based short glandular hairs on or near the margin, the inner surface covered with hairs, each segment attached inside the top of the receptacle and the lower part unthickened and curved back over the edge. *Petals* 5, dark pink, usually broad-linguiform, 6–8.5 mm long and c. $\frac{2}{3}$ as wide with the greatest width usually in the upper $\frac{1}{2}$, hairy at the base of the inner surface, deciduous. *Stamens* usually 10, 3 mm long; filament very stout and leaning back over the petal, c. 0.5 mm long and merging into the body of the anther; body of the anther dark purple, 1.5 mm long, very curved, shining, smooth, glabrous or with occasional hairs, abruptly contracted into the anther-tube; anther-tube curved, narrow, 1.5 mm long with a very oblique orifice. *Ovary* glabrous to densely pubescent, with stiff shining hairs, sometimes with short glandular hairs; more or less expanded at the base to form a very short stout stalk to the young fruit, the style slender or broad at the base, 1.5–2 mm long. *Ovules* 2, 1 in each loculus, attached to the upper part of the central axis. *Fruit* turgid each side of the central axis, rounded at the top and very cordate at the base, 2.5–3.3 mm long and somewhat more in width, pubescent. *Seeds* c. 2 mm long, ovoid, with somewhat dense spreading hairs, pale brown, with a scar at the base of the adaxial side, the appendage twisted towards the adaxial side, curled only near the tip but broad with sparse spreading hairs.

DISTRIBUTION: In sandy forest soil and on creek banks in dry sclerophyll forest in SW. Western Australia. Map 6, see p. 180.

SPECIMENS EXAMINED: WESTERN AUSTRALIA: Warren District: Rosa Brook, Royce 4624, 10.1953 (PERTH); McLeods Creek, Karridale, Royce 4634, 10.1953 (PERTH); Karri Dale (MEL); edge of Donnelly R, Davies 429, 1.1964 (PERTH); Big Brook, Koch 2596 K.12, 1921 (PERTH); Pemberton, Koch 2596, 11.1921 (NSW); Shannon R, Gardner 1.1936 (PERTH); on the Franklin R, Maxwell (MEL 1007789); Bow R, Jackson NSW 125089, 11.1912 (NSW); Bow R, Jackson NSW 125090, 12.1912 (NSW). Without precise locality: Western Australia, Drummond 197 (MEL 1007791).

This species with its lax habit and extremely slender stems is very distinct. Its closest affinities appear to be with *T. confertifolia*. In these two species the peduncle is very long and somewhat swollen at the base, also the calyx-segments are unthickened at the base and curved back over the edge of a small receptacle.

23. *Tetratheca juncea* Sm., Specimen Bot. New Holland: 5, t. 2 (1793); Willdenow, Sp. Pl. 2: 321 (1799); Persoon, Syn. Pl. 1: 419 (1805); Aiton, Hort. Kew. [ed. 2] 2: 347 (1811); J. E. Smith in Rees Cycl. 35 (2): (1817); Steudel, Nomencl. Bot.: 828 (1821); Candolle, Prodr. 1: 343 (1824); Sprengel, Syst. Veg. 2: 214 (1825); Steudel, Nomencl. Bot. [ed. 2] 2: 673 (1841); Walpers, Repert. Bot. Syst. 5: 70 (1845); A. Gray in Hooker's J. Bot. Kew Gard. Misc. 4: 200 (1852); Steetz, Familie Tremandreen: 11 (1853); Schuchardt, Syn. Tremandr.: 18 (1853); Bentham, Fl. Austral. 1: 132 (1863); Woolls, Pl. Indig. Neighb. Sydney: 11 (1880); F. Mueller, Fragm. 12: 6 (1882); F. Mueller, Syst. Census Austral. Pl. 1: 9 (1882); C. Moore, Census Pl. New South Wales: 5 (1884); F. Mueller, Second Syst. Census 1: 15 (1889); Moore & Betche, Handb. Fl. New South Wales: 36 (1893); Cheel in Proc. Linn. Soc. New South Wales 38: 528 (1913); Maiden & Betche, Census New South Wales Pl.: 119 (1916); Beadle, Evans & Carolin, Handb. Vasc. Pl. Sydney Distr.: 147 (1963); Beadle, Evans & Carolin, Fl. Sydney Region: 172 (1972); Beadle, Stud. Fl. NE. New South Wales: 157 (1973).

TYPE: I have not attempted to see Smith's specimens. There is no confusion about this species and the description and figure in Specimen of the Botany of New Holland are clear and detailed.

A prostrate, usually leafless, shrub with stems to 1 m in length, branching above a woody stock, the stock often horizontal and rhizomatous. *Stems* with 2 or 3 wings or somewhat quadrangular at the base, 0·8–1·5 mm broad in the flowering region, glabrous and covered with minute tubercles, the branches erect, alternate. *Leaves* alternate, to 20 mm in length and 5 mm in width, usually narrow-elliptical but at the base occasionally obovate, both surfaces glabrous, the lower somewhat paler, the margins flat or recurved, the apex blunt or pointed, the petiole absent; usually all leaves reduced to glabrous, very narrowly deltoid scales 3 mm or less in length. *Flowers* occurring singly or 2 together in leaf-axils, the bracts minute to 1 mm in length, light brown, linear-lanceolate, concave and glabrous or with a few hairs. *Peduncles* 5–10 mm long, tending to twist in the lower part, glabrous, dark towards the top, the top gradually expanding to a receptacle less than 1 mm in diameter. *Calyx-segments* 4, deciduous, 1–1·5 mm long, usually dark-coloured and shining, usually almost orbicular, often broader than long, obtuse to somewhat acuminate but the upper margins often almost crenulate, glabrous except on the inner surface which has fine hairs near the margin towards the apex, each segment attached at the edge of the receptacle and the base curved over the receptacle and top of the peduncle. *Petals* 4, dark pink, rarely white, obovate to broadly linguiform, 7–11 mm long and usually $\frac{2}{3}$ or more as wide with the greatest width in the upper $\frac{1}{3}$, deciduous. *Stamens* 8, 3–3·5 mm long; filament 0·5 mm or less in length; body of the anther 2–2·5 mm long, glabrous, the base flattened for the lower 0·5 mm and then abruptly curved or angled to approximately 90°, the apex tapering to the anther-tube; anther-tube tapering, somewhat curved, c. 0·75 mm long with a rather narrow orifice. *Ovary* glabrous, on a very conspicuous broad base, the top tending to taper to a glabrous, slender style 1·75–2 mm long. *Ovules* 4, 2 in each loculus, attached in pairs near the centre of the axis. *Fruit* obovate, often beaked, somewhat

stalked, 6–8 mm long and $\frac{1}{2}$ – $\frac{2}{3}$ as wide, the seed leaving a scar on the axis. Seeds c. 4 mm long, obovoid-cylindrical with a scar near the base, oblique at the base and flat on the adaxial surface, with fine brown appressed hairs, the appendage cream, irregularly twisted beyond the seed, hairy.

DISTRIBUTION: In sandy, occasionally somewhat swampy, heath and dry sclerophyll forest in coastal New South Wales. Map 7, see below.

SPECIMENS EXAMINED (SELECTION ONLY): NEW SOUTH WALES: North Coast: Alum Mt, Bulladelah, *Rupp* 2.1924 (MEL); above quarry, Mt Bulladelah, *Ford NSW* 125305, 10.1951 (NSW); Pacific Highway, 2 miles [3 km] N. of Karuah, *Telford* 8.1967 (CBG 022178); Wallaroo, *Burgess NSW* 125292, 8.1961 (NSW); Wallsend, *Boorman NSW* 19693, 9.1904 (NSW, BRI), *Boorman NSW* 125308, 10.1899 (NSW); near Wallsend, *Williams* 10.1961 (CBG 002921, 003006); Newcastle, *Cambage* 433, 7.1901 (NSW); New Lambton, Newcastle, *Wilson NSW* 125297, 9.1937 (NSW); Wakefield via Killingtonworth, *Sullivan NSW* 125289, 10.1940 (NSW); Toronto, *Lucas NSW* 125286, 10.1926 (NSW); Jewells Swamp, Belmont, *Baxter NSW* 114382, 9.1970 (NSW); Belmont, *Baxter NSW* 114380, 12.1970 (NSW); Central Coast: Lake Macquarie (NSW 125295, 125300); near Lake Macquarie, *Lamont* 285 (MEL); Morisset, *Boorman NSW* 125291, 9.1907 (NSW); Morisset, *Evans* 9.1925 (CANB 5623); Pacific Highway, 4 miles [6 km] S. of Swansea, *Coveny* 2130, 9.1969 (NSW); between Wyee and Cooranbong, *Burgess* 9.1963 (CBG 002920); Wyee, *Burgess* 8.1963 (CBG 006533); Ballman, *Leichhardt NSW* 125301, 7.— (NSW); Five Dock, *Deane NSW* 125299, 10.1884 (NSW); Undercliffe, *Fletcher NSW* 125296, 9.1889 (NSW); Bexley, *Williams NSW* 125307, 8.1913 (NSW); Kogarah, *Camfield NSW* 125306,

MAP 7



9.1893 (NSW); Carlton, *Camfield NSW* 125302, 125290, 8.1893 (NSW); Port Jackson, *Brown* (BRI), MEL 1007879, NSW 125293, 125294; Port Jackson, *Brown* 1802-5 (MEL 1008419, 1008420, NSW 125304); Sydney, *Mossman* 208 (BRI). Without precise locality; New South Wales, *Sutton* (BRI); New South Wales, *Cunningham* (MEL); Nova Hollandia orientali, *Sieber*, *Fl. Nov. Holl.* 235, *Fl. mixta* 529 (MEL 1007877, 1007878, 1008378); Australia, *Sehomburg* (AD).

The winged stem distinguishes *T. juncea* from other Eastern Australian species. *T. affinis*, the other winged species, differs in the calyx and receptacle. The affinities of this species are obscure but it bears some resemblance to *T. subaphylla*.

24. *Tetratheca shiresii* Blakely in Proc. Linn. Soc. New South Wales 50: 384 (1925); Beadle, Evans & Carolin, Handb. Vasc. Pl. Sydney Distr.: 147, 148 (1963); Beadle, Evans & Carolin, Fl. Sydney Region: 171, 172 (1972).

HOLOTYPE: Kariong Trig., head of Mullet Creek, Wondabyne district, New South Wales, *W. F. Blakely & D. W. C. Shires* 9.1923 (NSW 125153), cited as 'Kariong Trig. three miles northwest of Wondabyne . . . , without date.

A sprawling, weak-stemmed shrub usually 30-75 cm in height with numerous wiry stems arising from one or several places on a woody stock which may be either above or below the ground. Stems terete, somewhat vertically ridged, of two kinds, one glabrous, one with dense tubercle-based, pale brown, antrorse setae to 1 mm in length, the stems 0.3-1.5 mm broad in the flowering region, the branches opposite, alternate or several together and at an acute angle. Leaves of the glabrous branches opposite or in whorls of 3, rarely 4, usually 10-20 mm in length and 1 mm or less in width, linear, glabrous or with a few fine hairs especially towards the base of the upper surface, the margins closely revolute, the apex slightly incurved, tapering to a firm blunt or almost pungent point, the petiole short or absent. Leaves of the pubescent branches usually in whorls of 3 or 4, rarely 5, occasionally opposite, 4-12 mm long and up to 6 mm wide, broad-elliptical to ovate or even almost orbicular, the upper surface glabrous or with coarse stout-based hairs or their bases especially near the margin, the lower surface much paler, glabrous except for a few setae on the broad lower midrib, the margins flat, undulate or somewhat revolute, the apex usually tapering to a blunt point, the petiole short or absent. Flowers occurring in the axils of upper leaves of both types, the bracts 1-2 mm long, light brown, linear to lanceolate or oblanceolate, concave and glabrous or with some fine hairs especially on the upper surface. Peduncles dark-coloured, 5-12 mm long, glabrous or with occasional setae, expanding conspicuously and somewhat angled in the upper part, expanding again, usually abruptly, at the top to form a receptacle c. 1.5 mm in diameter. Calyx-segments 4, deciduous, usually dark-coloured, 3-6 mm long, broad-lanceolate to ovate, acute to acuminate, glabrous except on the inner surface which has a few hairs in the upper part near the margin, the base of each segment set well inside the top of the receptacle, the lower part of the segment with a somewhat thickened ridge across it above the outer rim of the receptacle. Petals 4, dark pink, rarely pale pink, obovate to linguiform, 10-20 mm long and usually a little less than $\frac{1}{2}$ as wide with the greatest width above the centre, usually in the upper $\frac{1}{3}$, deciduous. Stamens 8, 3.5-4.25 mm long, the filament 0.7-1 mm long, the body of the anther, c. 2.5 mm long, glabrous or rarely with a few minute hairs, curved at the base and flattened for c. 0.5 mm above the filament, scarcely contracting at the apex to the anther-tube; anther-tube broad, 0.8-1 mm long, tapering to a variable extent to an often rather broad orifice. Ovary covered with very minute dense stiff hairs and scattered small glandular-tipped hairs; the base broad, the apex tapering to a style 2-3 mm long with very minute hairs at the base and often some glandular hairs. Ovules 4, 2 in each loculus, attached close together in pairs just above the centre of the axis. Fruit obovate, somewhat stalked, 7.5 mm long and $\frac{2}{3}$ as broad, but not seen in mature condition. Seeds not seen.

DISTRIBUTION: In rocky, sandy or occasionally somewhat swampy heath in central coastal New South Wales. Map 7, sec p. 184.

**CATÁLOGO DOS BELOSTOMATIDAE
OCORRENTES NO ESTADO DO RIO DE JANEIRO**

Belostoma Latreille, 1807

Nepa Linnaeus, 1758 [em parte]:440. Espécie-tipo:
Nepa minor Palisot de Beauvois, 1805, des.
subseqüente por Palisot de Beauvois, 1805 *apud*
Menke (1958:173).

Belostoma Latreille, 1807:144. Espécie-tipo:
Belostoma testaceopallidum Latreille, 1807,
des. original.

Zaitha Amyot & Serville, 1843: 430. Espécie-tipo:
Zaitha stollii Amyot & Serville, 1843, des.
subseqüente por Kirkaldy (1906).

Perthostoma Leidy, 1847:59. Espécie-tipo:
Perthostoma testaceum Leidy, 1847, des. original.

Diagnose – Os representantes do gênero *Belostoma* podem ser reconhecidos e distinguidos daqueles do gênero *Lethocerus* por apresentarem o tarso do primeiro par de pernas com duas garras, sendo a interna mais desenvolvida; e os esternitos abdominais 5 e 6 não divididos por uma dobra semelhante a uma sutura.

Belostoma anurum (Herrich-Schäffer, 1848)

Diplonychus anurus Herrich-Schäffer, 1848:26,
fig.799.

Zaitha anurus: Dufour, 1863:388.

Zaitha stollii: Dufour, 1863 [provavelmente]:387
(non Amyot & Serville).

Zaitha subspinosa: Dufour, 1863 [provavelmente]:
387 (non Palisot de Beauvois).

Zaitha anura: Champion, 1901:365.

Belostoma boscii: Montandon, 1903c [em parte]:117
(non Le Peletier de Saint-Fargeau & Serville).

Belostoma anurum: Lauck, 1962:72, fig.51.

Belostoma dallasi: Schnack, 1973:9, fig.14 (non De
Carlo).

Tipo – Neótipo macho, depositado no SEMC.

Localidade-tipo – Bahia [?], Brasil, segundo LAUCK (1962: 74): “The original description and also the figure closely fit a series of specimens from Brazil, S.A., Bahia,... A male 31mm. long and 13.7mm. wide has been selected for the neotype (KU).”.

Material examinado – Rio de Janeiro: 5♂ /8♀ (AMNH): [sem coletor e data], [“N.Thayer exp.”]. 1♀ (DZ RJ 487): 16/V/1990, L.B.N.Coelho col. 1♂ (DZ RJ 363): Rio de Janeiro, Barra I [“2”], [sem coletor e data]. 1♀ (DZ RJ 365): Rio de Janeiro, Barra II [“AM 20”], 13/VI/1987, [sem coletor]. 1♀ (DZ RJ 474): Rio de Janeiro, Barra da Tijuca, 16/

VI/1982, A.L.Pimenta col. 1♀ (DZ RJ 499): Rio de Janeiro, Jardim Botânico, 09/IV/1983, C.L.Martins col. 1♂ (DZ RJ 481): Andrade Costa, 02/IV/1983, D.H.B.Simas col. 1♂ (DZ RJ 498): Araruama, 09/IV/1983, A.A.Peixoto col. 1♂ (DZ RJ 372): Araruama, Parque Mataruna, 20/XII/1992, E.R.Calil col. 1♀ (DZ RJ 477): Arraial do Cabo [em brejo], 11/XI/1988, N.Ferreira Jr. col. 1♂ (DZ RJ 11): Rio de Janeiro, Campo Grande, 30/V/1982, Rosângela col. 1♀ (DZ RJ 5): Iguaba, 20/VI/1984, R.C.Vasconcellos col. 1♂ (DZ RJ 6): Rio de Janeiro, Ilha do Fundão, 12/IX/1983, A.L.Carvalho col. 1♂ (DZ RJ 483): Rio de Janeiro, Ilha do Fundão - UFRJ, 27/VII/1978, Luiz L. col. [?] 1♂ (DZ RJ 500): Itaboraí, Venda das Pedras, 15/XI/1982, S.R.Brandão dos Santos col. 1♂ /1♀ (MZSP): Itatiaia, 05/II/1957, M.A.Vulcano col. 1♀ (DZ RJ 7): Macaé, Lago Camorim, 08/IV/1979, L.C.S.Ferreira col. 3♂ (DZ RJ 471): Macaé, Lagoa Imboassica [margem], 04-05/VIII/1998, “eq. entomologia” [J.R.I.Ribeiro]. 1♂ (DZ RJ 12): Magé, 29/II/1996, E.D.Alves col. 1♀ (DZ RJ 15): Magé, 13/XI/1995, E.D.Alves col. 1♀ (DZ RJ 16): Magé, 31/X/1995, E.D.Alves col. 1♂ /1♀ (DZ RJ 43): Magé, 14/XI/1995, E.D.Alves col. 1♀ (DZ RJ 486): Magé, [sem data], E.D.Alves col., [criado em laboratório]. 1♂ (DZ RJ 50): Magé [poça], 29/II/1996, E.D.Alves col. 1♂ (DZ RJ 382): Maricá, 26/VI/1986, T.Kenny col. 3♀ (DZ RJ 488): Maricá, 09/VII/1996, N.Ferreira Jr. col. 1♀ (DZ RJ 9): Niterói, Itaquatiara, 15/X/1983, C.M.Carvalho. 1♂ (DZ RJ 13): Maricá, Restinga de Maricá, 30/I/1996, J.R.I.Ribeiro col. 2♂ (DZ RJ 302): Maricá, Restinga de Maricá, 16/V/1996, J.R.I.Ribeiro col. 1♂ (DZ RJ 347): Maricá, Restinga de Maricá, 13/VI/1996, J.R.I.Ribeiro col. 1♂ (DZ RJ 351): Maricá, Restinga de Maricá, 08/VII/1996, N.Ferreira Jr. col. 1♂ (DZ RJ 32): Maricá, Restinga de Maricá [poça n.4], 10/XI/1995, J.R.I.Ribeiro col. 1♀ (DZ RJ 33): Maricá, Restinga de Maricá [poça n.4], 10/XI/1995, N.Ferreira Jr. col. 1♀ (DZ RJ 34): Maricá, Restinga de Maricá [poça n.4], 10/XI/1995, J.R.I.Ribeiro col. 1♂ (DZ RJ 65): Maricá, Restinga de Maricá [poça n.4], 31/I/1996, J.R.I.Ribeiro col. 1♂ (DZ RJ 125): Maricá, Restinga de Maricá [poça n.5], 23/II/1996, J.R.I.Ribeiro col., [com ovos sobre os hemiélitros]. 1♂ /1♀ (DZ RJ 88): Maricá, Restinga de Maricá [poça n.6], 31/I/1996, J.R.I.Ribeiro col. 1♂ (DZ RJ 482): São Gonçalo, 18/XII/1982, C.C.N.Félix col. 1♂ (DZ RJ 480): Saquarema, 19/VI/1982, (Tereza[?]). 1♂ (DZ RJ 497): Silva Jardim, Rio São João, 30/VIII/1997, D.M.Takiya col. 1♂ (DZ RJ 378): Teresópolis, 31/XII/1994, [sem coletor].

Distribuição – MÉXICO. PANAMÁ. CUBA. PEQUENAS ANTILHAS. GUATEMALA. GRANADA. COSTA RICA. REPÚBLICA DOMINICANA. COLÔMBIA. GUIANAS [?]. BRASIL: Maranhão, Ceará, Rio Grande do Norte, Alagoas, Bahia, Minas Gerais, Espírito Santo, Rio de Janeiro (*Andrade Costa[?], *Araruama, *Arraial do Cabo, *Macaé - Lagoa Camorim e Lagoa Imboassica, *Magé, Maricá - Restinga de Maricá, *Niterói - Itaquatiara, *Itaboraí, *Itatiaia, *Rio de Janeiro, *São Gonçalo, *Saquarema, *Silva Jardim, *Teresópolis), São Paulo, Santa Catarina. CHILE. PARAGUAI. ARGENTINA.

Belostoma aurivillianum (Montandon, 1899)

Zaitha aurivilliana Montandon, 1899:171.

Belostoma aurivillianum: Kirkaldy & Torre-Bueno, 1909:190.

Tipos – Descrição baseada em três síntipos: um espécime macho, depositado no HNHM, procedente da Venezuela; outro macho, depositado no MNHN, procedente da Colômbia [designado por RIBEIRO (no prelo) como lectótipo]; e um espécime não examinado, depositado no NHRS, procedente do Brasil.

Material examinado – Rio de Janeiro: *1♂ [Instituto Ecologia Experimentação Agrícolas] (MNRJ 121): Resende, X/1944, ([?] Arlé).

Distribuição – COLÔMBIA. VENEZUELA. SURINAME. BRASIL: Roraima, Pará, Acre, Mato Grosso, Goiás, Minas Gerais, São Paulo, *Rio de Janeiro (Resende), Paraná, Rio Grande do Sul. BOLÍVIA. PARAGUAI.

Belostoma candidulum Montandon, 1903

Belostoma candidulum Montandon, 1903b:363.

Belostoma horvathi: De Carlo, 1938:224 (non Montandon).

Belostoma machrisi Menke & Lauck, 1962:7.

Belostoma sanctulum: Ribeiro, Nessimian & Mendonça, 1998 [em parte]:118 (non Montandon).

Tipos – Holótipo fêmea e um parátipo macho, depositados no NHRS.

Localidade-tipo – Segundo ESTÉVEZ (1996:58), consta na etiqueta a descrição “Rio Grande do Sul”. Rio Grande do Sul [?], Brasil.

Material examinado – Rio de Janeiro: 1♀ (DZRJ 366): Maricá, 21/II/1988, [sem coletor]. 1♀ (DZRJ 503): Maricá, 21/I/1988, [sem coletor]. 1♂ (DZRJ 18): Maricá, Restinga de Maricá, 18/X/1996, J.R.I.Ribeiro col. 1♀ (DZRJ 19): Maricá, Restinga

de Maricá, [brejo], 12/XI/1993, J.L.Nessimian e E.R.Calil cols. 1♂ (DZRJ 20): Maricá, Restinga de Maricá, 30/I/1996, J.R.I.Ribeiro col. 1♀ (DZRJ 21): Maricá, Restinga de Maricá, 30/I/1996, J.R.I.Ribeiro col. 1♀ (DZRJ 168): Maricá, Restinga de Maricá, 14/III/1996, J.R.I.Ribeiro col. 1♂ /1♀ (DZRJ 228) [com ovos sobre os hemiélitros]: Maricá, Restinga de Maricá, 12/IV/1996, J.R.I.Ribeiro col. 1♀ (DZRJ 505): Teresópolis, Subaio, 07/VI/1996, J.R.I.Ribeiro col.

Distribuição – BRASIL: Goiás, Minas Gerais, São Paulo, *Rio de Janeiro (Maricá - Restinga de Maricá, Teresópolis - Serra do Subaio), Rio Grande do Sul. ARGENTINA. URUGUAI.

Belostoma costalimai De Carlo, 1938

Belostoma costalimai De Carlo, 1938:234, pr.VI (fig.72).

Belostoma truxali De Carlo, 1960:47 [ver RIBEIRO (no prelo)].

Tipos – Holótipo macho, possivelmente perdido e parátipo fêmea depositado no MACN. Um parátipo macho, supostamente depositado na FIOC (DE CARLO, 1938: 235), está no MNRJ. Outro parátipo, não examinado, na coleção do Dr. Aleixo de Vasconcelos sic [= Vasconcelos] (ver LAUCK, 1964; RIBEIRO, no prelo).

Localidade-tipo – Rio de Janeiro [?], Brasil.

Material examinado – Rio de Janeiro: 4♂ /4♀ (DZRJ 469): Macaé, Lagoa Imboassica, 04-05/VIII/1998, J.R.I.Ribeiro, N.Ferreira Jr. e A.M.Sanseverino cols. 1♂ (DZRJ 470): Macaé, Lagoa Cabiúnas, 18/VII/1998, A.M.Sanseverino col.

Distribuição – COLÔMBIA. SURINAME. BRASIL: Roraima, Pará, Tocantins, Mato Grosso, Goiás, Minas Gerais, Espírito Santo, São Paulo, Rio de Janeiro (Macaé - Lagoa Cabiúnas e Lagoa Imboassica).

Belostoma dentatum (Mayr, 1863)

Zaitha dentata Mayr, 1863:356.

Zaitha eumorpha Dufour, 1863 [provavelmente em parte]:386.

Zaitha mayri Berg, 1884 [questionável]:120.

Belostoma dentatum: Montandon, 1903c [incluindo as variações *major* e *mayr*; *mayri* questionável]:116.

Tipo – Holótipo macho, provavelmente perdido. Segundo SCHNACK (1976), o tipo estaria depositado no NHMW. Porém, ao ser procurado, este espécime não foi encontrado.

Localidade-tipo – São Leopoldo, Rio Grande do Sul, Brasil.

Material examinado – Rio de Janeiro: 1♀ (MNRJ 84); Rio de Janeiro, [Estação Marechal Deodoro], 03/I/1938, W.Zlkan col., J.A. de Carlo det.

Distribuição – VENEZUELA. BRASIL: Pará, Piauí, Amazonas, Acre, Rondônia, Mato Grosso, Minas Gerais, Mato Grosso do Sul, São Paulo, Rio de Janeiro (*Rio de Janeiro), Rio Grande do Sul. PERU. BOLÍVIA. PARAGUAI. ARGENTINA. URUGUAI.

Belostoma dilatatum (Dufour, 1863)

Zaitha dilatata Dufour, 1863:387.

Belostoma dilatatum: Montandon, 1900 *apud* Lauck (1963):537.

Belostoma dentatum: De Carlo, 1930:109, pr.VI (fig. 17) (*non* Mayr).

? *Belostoma ripicolum* Lanzer-de-Souza, 1992:147.

Tipo – Neótipo macho, depositado no SEMC.

Localidade-tipo – Departamento de Guairá, Villa Rica, Paraguai.

Material examinado – Rio de Janeiro: 1♀ (DZRJ 476); Iguaba Grande, Lagoa Araruama, 01/IV/[?], M.A.Basbaum col.

Distribuição – BRASIL: Pará, Paraíba, Mato Grosso, Minas Gerais, Mato Grosso do Sul, *Rio de Janeiro (Iguaba Grande - Lagoa Araruama), São Paulo, Rio Grande do Sul. BOLÍVIA. PARAGUAI. ARGENTINA. URUGUAI.

Belostoma discretum Montandon, 1903

Belostoma discretum Montandon, 1903a:22.

Tipos – De acordo com DE CARLO (1938) e LAUCK (1963), A.L.Montandon não designou um holótipo. A descrição da espécie foi baseada em uma série de espécimes (não se sabe a quantidade) da Argentina, do Brasil e do Paraguai, depositados no MNHN e no NHMW. Um lectótipo (Manaus, Amazonas, Brasil) foi designado em RIBEIRO (no prelo).

Material examinado – Rio de Janeiro: 1♂ (DZRJ 564); Maricá, Rio Ubatiba [correnteza, em vegetação marginal], 19/X/1998, J.C.F.Assis col. 2♂ (DZRJ 570); Maricá, Rio Ubatiba [em algas e litter], 11/XI/1997, (sem coletor). 1♂ (DZRJ 497); Silva Jardim, Rio São João, 30/VIII/1997, D.M.Takiya col.

Distribuição – BRASIL: Pará, Amazonas, Acre, Rondônia, Mato Grosso, Goiás, Mato Grosso do Sul, São Paulo, *Rio de Janeiro (Maricá – Rio Ubatiba, Silva Jardim). PERU. BOLÍVIA. PARAGUAI. ARGENTINA.

Belostoma foveolatum (Mayr, 1863)

Zaitha foveolata Mayr, 1863:355.

Belostoma foveolatum: Kirkaldy & Torre-Bueno, 1909 [provavelmente só em parte]:191.

Tipo – Holótipo fêmea, depositado no NHMW.

Localidade-tipo – Desconhecida.

Nota: Nenhum espécime ocorrente no Estado do Rio de Janeiro foi examinado.

Distribuição – GUIANA FRANCESA. BRASIL: Pará, Ceará, Minas Gerais, Mato Grosso do Sul, São Paulo, Rio de Janeiro (Rio de Janeiro). PARAGUAI. ARGENTINA.

Belostoma micantulum (Stål, 1860)

Zaitha micantula Stål, 1860:84.

Zaitha zelotypus White, 1879:270.

Belostoma micantulum: Kirkaldy & Torre-Bueno, 1909:191.

Tipo – Lectótipo macho, depositado no NHRS.

Localidade-tipo – Segundo ESTÉVEZ (1996:71), consta na etiqueta do lectótipo a descrição “Rio Jan.”. Rio de Janeiro [?], Brasil.

Material examinado – Rio de Janeiro: 1♀ (DZRJ 478); Arraial do Cabo, 11/XI/1988, N.Ferreira Jr. col. 1♂ (DZRJ 644); Macaé, Lagoa Cabiúnas, 03-04/VIII/1999, N.Ferreira Jr. col. 2♂ [com ovos sobre os hemiélitros] (DZRJ 89); Maricá, Restinga de Maricá, Brejo-Canal de Itaipuaçu, 31/I/1996, J.R.I.Ribeiro col.

Distribuição – COLÔMBIA. VENEZUELA. GUIANA. SURINAME. BRASIL: Amapá, Pará, Amazonas, Ceará, Tocantins, Mato Grosso, Goiás, Minas Gerais, Mato Grosso do Sul, Rio de Janeiro (*Arraial do Cabo, *Macaé - Lagoa Cabiúnas, *Maricá - Restinga de Maricá), Rio Grande do Sul. BOLÍVIA. PARAGUAI. ARGENTINA. URUGUAI.

Belostoma horvathi Montandon, 1903

Belostoma horvathi Montandon, 1903b:359.

Belostoma oxyurum: Nieser & Melo, 1997:60 (*non* Dufour).

Belostoma sanctulum: Ribeiro, Nessimian & Mendonça, 1998 [em parte]:118 (*non* Montandon).

Tipo – Holótipo fêmea, depositado no HNH (MONTANDON, 1903b; RIBEIRO, no prelo).

Localidade-tipo – Santa Catarina [?], Brasil.

Material examinado – Rio de Janeiro: 1♂ (DZRJ 18); Maricá, Restinga de Maricá, 18/X/1996, J.R.I.Ribeiro

col. 1♂ (DZRJ 308): Maricá, Restinga de Maricá, 16/V/1996, J.R.I.Ribeiro col. 1♂ [com ovos sobre os hemiélitros] (DZRJ 78): Maricá, Restinga de Maricá, [área de brejo], 31/I/1996, J.R.I.Ribeiro col.

Distribuição – BRASIL: Goiás, Minas Gerais, Rio de Janeiro (Maricá - Restinga de Maricá), São Paulo, Paraná, Santa Catarina, Rio Grande do Sul. ARGENTINA.

Belostoma plebejum (Stål, 1860)

Zaitha plebeja Stål, 1860:83.
Zaitha maculosa Dufour, 1863:389.
Zaitha limbata Dufour, 1863:390.
Zaitha adusta Dufour, 1863:390.
Zaitha difficilis Dufour, 1863:391.
Zaitha micantula: Dufour, 1863 [provavelmente]:391 (non Stål).
Belostoma plebejum: Kirkaldy & Torre-Bueno, 1909 [provavelmente em parte]:192.
Belostoma amici: Piza-Jr., 1975 [em parte, alguns parátipos]:67 (non Piza-Jr.).

Tipo – Holótipo macho, depositado no NHRS.

Localidade-tipo – Segundo ESTÉVEZ (1996:78), consta na etiqueta do holótipo a descrição “Rio Jan.”. Rio de Janeiro [?], Brasil.

Material examinado – Rio de Janeiro: 1♀ (DZRJ 1063): Magé, Campo dos Escoteiros [em brejo], 02/II/2002, N.Ferreira Jr. 1♂ (DZRJ 455): Maricá, Restinga de Maricá [poça adjacente à mata], 09/VII/1996, N.Ferreira Jr. col. 2♀ (DZRJ 1051): Mendes [açude do curral], [“Faz. São José das Paineiras”], 23/X/1999, C.N.Francischetti col. 1♂ (DZRJ 1047): Teresópolis, Serra do Subaio [em represa], 11/X/1996, J.R.I.Ribeiro col.

Distribuição – VENEZUELA. BRASIL: Pará, Bahia, Mato Grosso, Goiás, Minas Gerais, Espírito Santo, São Paulo, Rio de Janeiro (Araruama - Lagoa Juturnaíba, *Magé - Campo dos Escoteiros, *Maricá - Restinga de Maricá, *Mendes, *Teresópolis), Santa Catarina. PERU. PARAGUAI. ARGENTINA. URUGUAI.

Belostoma ribeiroi De Carlo, 1933

Belostoma ribeiroi De Carlo, 1933:95, fig.3.
Belostoma dufouri De Carlo, 1933:96, fig.4.
Belostoma lundbladi De Carlo, 1963:20 [ver RIBEIRO (no prelo)].

Tipo – Holótipo macho, depositado no MNRJ.

Localidade-tipo – Gruta do Tucum [?], Mato Grosso, Brasil.

Material examinado – Rio de Janeiro: 1♂ (MACN 3680): Itatiaia, VII/1902, C.Moreira col., J.A. de Carlo det. como *B. testaceopallidum*, 1999. 1♂ (DZRJ-s 2): Teresópolis, 14/III/1996, A.C.R.Alves col.

Distribuição – BRASIL: Mato Grosso, Goiás, Distrito Federal, Minas Gerais, *Rio de Janeiro (Itatiaia, Teresópolis), Santa Catarina.

Belostoma sanctulum Montandon, 1903

Belostoma sanctulum Montandon, 1903b:362.
Belostoma amici: Piza-Jr., 1975 [em parte, alguns parátipos]:67 (non Piza-Jr.).

Tipos – Lectótipo macho, depositado no HNHM. ESTÉVEZ (1996) designou ainda um paralectótipo macho, depositado no NHMW.

Localidade-tipo – Segundo ESTÉVEZ (1996: 56), consta na etiqueta do holótipo “Esperito Santo” sic. Espírito Santo [?], Brasil.

Material examinado – Rio de Janeiro: 1♀ (DZRJ 17): Teresópolis, Serra do Subaio, [sem coletor e data], A.L.Melo det. 1999.

Distribuição – BRASIL: Espírito Santo, *Rio de Janeiro (Teresópolis - Serra do Subaio), São Paulo, Santa Catarina. ARGENTINA.

Belostoma stollii (Amyot & Serville, 1843)

Zaitha stollii Amyot & Serville, 1843 [designação da espécie-tipo de *Zaitha*]:430.
Zaitha stollii: Mayr, 1871:406.
Belostoma stollii: Montandon, 1903 *apud* Lauck (1963):240.

Belostoma stollii: Kirkaldy & Torre-Bueno, 1909:192.

Belostoma brasiliensis De Carlo, 1950:529 [ver RIBEIRO (no prelo)].

Belostoma planum Lauck, 1963:47, (Fig.58), (Fig.64) [ver RIBEIRO (no prelo)].

Belostoma stoli: Nieser & Melo, 1997:61.

Tipo – Neótido macho, depositado no USNM.

Localidade-tipo – Departamento de Rivière de Kourou, Pariacabo, Guiana Francesa.

Material examinado – Rio de Janeiro: 1♂ (DZRJ 465): Magé, 14/II/1988, [sem coletor]. 1♂ (DZRJ 466): Magé, Citrolândia, [sem data], H.W.Tavares col.

Distribuição – VENEZUELA. GUIANA. SURINAME. GUIANA FRANCESA. BRASIL: Pará, Amazonas, Mato Grosso, Minas Gerais, Rio de Janeiro (Magé - Citrolândia). PERU. BOLÍVIA.

Belostoma testaceopallidum Latreille, 1807
Belostoma testaceopallidum Latreille, 1807:144.
Zaitha stollii: Mayr, 1863 [questionável]:352 (*non* Amyot & Serville).
Zaitha margineguttata Dufour, 1863 [questionável]: 387.
Zaitha carbonaria Dufour, 1863 [questionável]:388.
Belostoma grandicollum De Carlo, 1934:109 [ver RIBEIRO (no prelo)].
Belostoma longirostrum De Carlo, 1934:110, fig.2.
Belostoma stollii: De Carlo, 1950:531 (*non* Amyot & Serville).

Tipo – Neótipo macho, depositado no USNM.

Localidade-tipo – Curitiba, Paraná, Brasil.

Material examinado – Rio de Janeiro: 3♂ / 6♀ (MNRJ 103): Lombardia, Santa Teresa, 13/IX/1943, [?] Machado col., J.A. de Carlo det. 1♀ (MACN 53478); Rio de Janeiro, Lombardia, Santa Teresa, 13/IX/1943, [?] Machado col., J.A. de Carlo det. 1♂ (MNRJ 105); Itatiaia, VII/1902, C.Moreira col., J.A. de Carlo det. como *B. longirostrum*. 1♂ (MNRJ 158); Itatiaia [700m], 06/XII/1949, W.Zikán col. 1♂ (DZRJ 507); Nova Friburgo, Rio Caledônia, 07/II/1991, L.F.Dorvillé, J.L.Nessimian e E.R. da Silva cols. 1♂ (MNRJ 116); Teresópolis, 06/III/1918, M.Ribeiro col., J.A. de Carlo det., holótipo de *B. longirostrum*. 1♂ [com ovos sobre os hemiélitros] (DZRJ 467); Teresópolis, "Faz. Vale da Revolta", 02/IX/1989, R.Sachse col. 1♀ (DZRJ 3); Teresópolis, Serra do Subaio ["represa acima"], 06/VI/1996, E.C.Mendonça col. 1♀ (DZRJ 352); Teresópolis, Subaio, 06-09/VI/1996, "Equipe entomologia" cols.

Distribuição – PEQUENAS ANTILHAS: Guadalupe. BRASIL: Mato Grosso, Bahia[?], Minas Gerais, Rio de Janeiro (*Itatiaia, *Nova Friburgo, *Rio de Janeiro, Teresópolis), São Paulo, Paraná, Santa Catarina. ARGENTINA.

Lethocerus Mayr, 1853

Nepa Linnaeus, 1758 [em parte]:440 [não foi designada espécie-tipo para este gênero].
Belostoma Latreille, 1809 [em parte]:384 (emenda não justificada).
Belostomum Burmeister, 1835:195. Espécie-tipo: *Nepa grandis* Linnaeus, 1758, por monotipia.
Lethocerus Mayr, 1853 *apud* De Carlo, 1964:337. Espécie-tipo: *Lethocerus cordofanus* Mayr, 1853 [ninfal], por monotipia.
Benacus Stål, 1862 *apud* Lauck & Menke, 1961:647. Espécie-tipo: *Belostoma haldemanum* Leidy, 1847 (= *Belostoma grisca* Say, 1832), por monotipia.

Amorgius Stål, 1865:179. *Nomen nudum*.
Kirkaldyia Montandon, 1909 *apud* De Carlo, 1964:337. Espécie-tipo: *Belostoma boutareli* Montandon, 1895, des. original.

Diagnose – Os representantes do gênero *Lethocerus* podem ser reconhecidos e distinguidos daqueles do gênero *Belostoma* por apresentarem os tarsos do primeiro par de pernas com uma única garra bem desenvolvida; e os esternitos abdominais 5 e 6 lateralmente divididos por uma dobra semelhante a uma sutura.

Lethocerus annulipes (Herrich-Schäffer, 1846)

Belostoma annulipes Herrich-Schäffer, 1846 *apud* De Carlo, 1964:349.

Belostoma ruficeps Dufour, 1863:382.

Belostoma signoreti Dufour, 1863:382.

Belostoma mayri Montandon, 1896 *apud* De Carlo, 1964:349.

Lethocerus annulipes: De Carlo, 1930:107, pr.6 (figs.21-22).

Tipo – Possivelmente, o espécime observado por G. Herrich-Schäffer, depositado no ZSMC, está perdido.

Localidade-tipo – Segundo G. Herrich-Schäffer, a espécie foi descrita com base em um espécime da América do Sul.

Material examinado – Rio de Janeiro: 1♂ (DZRJ 657); Iguaba Grande, 06/IV/1996, M.J.S.Ermida col. 1♀ (DZRJ 6); Maricá, Restinga de Maricá, 15/X/1988, N.Ferreira Jr. col. 1♂ (DZRJ 11); Maricá, Restinga de Maricá, 07/V/1988, N.Ferreira Jr. col.

Distribuição – MÉXICO. CUBA. JAMAICA. ANTILHAS MAIORES. ANTILHAS MENORES. BELIZE. GUATEMALA. HONDURAS. COSTA RICA. NICARÁGUA. PANAMÁ. COLÔMBIA. VENEZUELA. GUIANA. SURINAME. GUIANA FRANCESA. BRASIL: Mato Grosso, Minas Gerais, Goiás, São Paulo, Rio de Janeiro (*Maricá - Restinga de Maricá, *Iguaba Grande), Santa Catarina, Rio Grande do Sul. PARAGUAI. ARGENTINA. URUGUAI.

Lethocerus delpontei De Carlo, 1930

Belostoma annulipes: Montandon, 1895 *apud* De Carlo, 1964:349.

Lethocerus delpontei De Carlo, 1930:108, pr.7 (fig.24).

Tipos – Holótipo macho e paráticos [?], depositados no MACN.

Localidade-tipo – Cidade de Iguazú, Misiones, Argentina.

Material examinado – Rio de Janeiro: 1♂ (DZRJ 5): Maricá, Restinga de Maricá, 15/X/1988, N.Ferreira Jr. col. 1♀ (DZRJ 7): Magé, Campo dos Escoteiros, 26/VII/1987, A.L.Carvalho e J.L.Nessimian cols.

Distribuição – MÉXICO. CUBA. JAMAICA. HONDURAS. EL SALVADOR. NICARÁGUA. COSTA RICA. PANAMÁ. VENEZUELA. EQUADOR. SURINAME. BRASIL: Goiás, São Paulo, Rio de Janeiro (*Magé, Maricá - Restinga de Maricá), Paraná, Santa Catarina. PARAGUAI. ARGENTINA.

Lethocerus grandis (Linnaeus, 1758)

Nepa grandis Linnaeus, 1758:440.

Belostoma grandis: Latreille, 1809:384.

Lethocerus latus Cummings, 1933:210.

Lethocerus grandis: De Carlo, 1938:208, pr.5 (fig.46).

Tipos – Segundo H.B.Hungerford, a descrição desta espécie foi baseada em 26 espécimes depositados no UZIU, supostamente examinados por C. Linnaeus (CUMMINGS, 1933).

Localidade-tipo – Não designada.

Material examinado – Rio de Janeiro: 1♂ (DZRJ 1): Rio de Janeiro, Barra da Tijuca [atraído pela luz], 21/III/1994, (sem coletor). 1♂ (DZRJ 8): Saquarema, 09/III/1992, C.C. de Oliveira col.

Distribuição – COLÔMBIA. GUIANA FRANCESA. BRASIL: Igarapé Assu sic [?], Minas Gerais, São Paulo, Rio de Janeiro (*Rio de Janeiro – Barra da Tijuca, *Saquarema). PARAGUAI. ARGENTINA.

Lethocerus maximus De Carlo, 1938

Lethocerus maximus De Carlo, 1938:209, pr.5 (fig.47).

Tipos – Holótipo macho, três parátipos fêmeas e onze parátipos machos depositados no MACN. Segundo DE CARLO (1938), há um parátipo (não há indicação do sexo) no MLPA.

Localidade-tipo – Paraguai [sem indicação mais precisa da localidade].

Nota: Nenhum espécime ocorrente no Estado do Rio de Janeiro foi examinado.

Distribuição – ANTILHAS MENORES. TRINIDAD. VENEZUELA. BRASIL: Mato Grosso do Sul, Rio de Janeiro (Rio de Janeiro), Rio Grande do Sul. BOLÍVIA. PARAGUAI. ARGENTINA.

Lethocerus melloleitaoi De Carlo, 1933

Lethocerus melloleitaoi De Carlo, 1933:93, figs. 1-2.

Tipos – Holótipo macho e parátipos [?] depositados no SEMC. Um parátipo sem a genitália, depositado no MNRJ.

Localidade-tipo – Blumenau, Santa Catarina, Brasil.

Material examinado – Rio de Janeiro: 1♀ (MNRJ 59): Petrópolis, Alto Mosela, La Vallor, 12/8-3[?]/1957, J.A. de Carlo det. 1♂ (MNRJ 60) [“no.10/400”]: Petrópolis, “Pr. Independência”, [sem data], (“Príncipe Paulo Gagarin leg.”), J.A. de Carlo det., parátipo.

Distribuição – BRASIL: Rio de Janeiro (Petrópolis – Independência), Santa Catarina. PARAGUAI. ARGENTINA.

Comentários – Com base na chave de identificação proposta por NIESER & MELO (1997), *L. melloleitaoi* pode ser separado de *L. delpontei* pelo aspecto da morfologia do divertículo ventral do falo, pela parte ventral do abdome geralmente parda, bem como pelas tibias posteriores com a margem externa tão curva quanto a margem interna, condição considerada duvidosa neste estudo. Entretanto, não foi possível comparar as genitálias masculinas das duas espécies, visto que o parátipo macho de *L. melloleitaoi*, depositado no MNRJ, teve sua genitália perdida. O aspecto pardo, contrastante com o “algo avermelhado” referente a *L. delpontei* na chave (NIESER & MELO, 1997), foi, por outro lado, observado. Portanto, é necessário observar mais espécimes de *L. melloleitaoi*, bem como o seu holótipo, para uma avaliação mais robusta da validade dessa espécie.

AGRADECIMENTOS

Ao Prof. Dr. A.L.Melo (UFMG), ao Prof. Dr. J.L.Nessimian (DZRJ) e ao Prof. M.Félix (MNRJ), que revisaram cuidadosamente o manuscrito. Ao Prof. J.Becker (MNRJ), pelo empréstimo de bibliografia fundamental à realização deste trabalho e pelas valiosas sugestões. Os espécimes analisados foram gentilmente emprestados pelos seguintes curadores: Prof. Dr. A.Orosz (HNHM), Prof. Dr. A.L.Melo (UFMG), Prof. Dr. A.O.Bachmann (MACN), Profa Dra D.Pluot-Sigwalt (MNHN), Prof. Dr. H.Zettel (NHMW), Prof. Dr. J.L.Nessimian (DZRJ), Prof. Dr. M.A.Monné (MNRJ) e Prof. Dr. R.W.Brooks (SEMC). À Coordenação de Aperfeiçoamento de Pessoal de Nível Superior

(CAPES), ao Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq), à Fundação de Amparo à Pesquisa do Estado do Rio de Janeiro (FAPERJ) e à Fundação Universitária José Bonifácio (FUJB), pela subvenção deste estudo.

REFERÊNCIAS

- AMYOT, C.J.B. & SERVILLE, J.G.A. 1843. **Histoire naturelle des insectes hémiptères**. Paris: Librairie Encyclopédique de Roret. lxxxvi, 681p., 12 pr.
- BERG, C. 1884. Addenda et emendanda ad Hemiptera argentina. **Anales de la Sociedad Científica Argentina**, Buenos Aires, **16**:121-122.
- BURMEISTER, H. 1835. **Handbuch der entomologie 2. Ordnung Rhynchota**. Berlin: [?]. iv, 400p.
- CHAMPION, G.C., 1901. Order Rhynchota. Suborder Hemiptera-Heteroptera. Belostomatidae. **Biología Centrali-americana**, Londres, **2**:1-416.
- CUMMINGS, C., 1933. The giant water bugs (Belostomatidae-Hemiptera). **Kansas University Scientific Bulletin**, Lawrence, **21**(2):197-219.
- DE CARLO, J.A., 1930. Familia Belostomidae, géneros y especies para la Argentina. **Revista de la Sociedad Entomológica Argentina**, Buenos Aires, **3**:110-116.
- DE CARLO, J.A., 1933. Familia Belostomidae (Hemiptera); descripción de especies nuevas procedentes del Brasil. **Boletim do Museu Nacional do Rio de Janeiro**, Rio de Janeiro, **9**(1):93-98.
- DE CARLO, J.A., 1934. Descripción de especies nuevas de belostómidos (Hemiptera). **Boletim do Museu Nacional do Rio de Janeiro**, Rio de Janeiro, **10**:109-110.
- DE CARLO, J.A., 1938. Los belostómidos americanos. **Anales del Museo Argentino de Ciencias Naturales**, Buenos Aires, **39**(155):189-260, 7 pr.
- DE CARLO, J.A., 1950. Descripción de especies nuevas de "Ranatridae" y "Belostomidae" y algunas aclariaciones referentes a otras poco conocidas (Hemiptera). **Revista Brasileira de Biología**, Rio de Janeiro, **10**(4):521-532.
- DE CARLO, J.A., 1960. Especies nuevas del género *Belostoma* y consideraciones sobre otras poco conocidas (Hemiptera - Belostomatidae). **Revista de la Sociedad Entomológica Argentina**, Buenos Aires, **22**:47-59.
- DE CARLO, J.A., 1963. I. Una nueva especie del género *Ranatra* y referencias de *Ranatra magna* Kuitert (Ranatridae). II. Una nueva especie del género *Belostoma* Latreille (Belostomatidae). **Revista de la Sociedad Entomológica Argentina**, Buenos Aires, **24**(1-4):192-222.
- DE CARLO, J.A., 1964. Género *Lethocerus* Mayr (Hemiptera-Belostomatidae). **Physis**, Buenos Aires, **24**(68):337-350.
- DE CARLO, J.A., 1966. Un nuevo género, nuevas especies y referencias de otras poco conocidas de la familia Belostomidae (Hemiptera). **Revista de la Sociedad Entomológica Argentina**, Buenos Aires, **28**:97-109.
- DUFOUR, L., 1863. Essai monographique sur les Belostomides. **Annales de la Société Entomologique de France** (sér.4), Paris, **3**:375-400.
- ESTÉVEZ, A.L., 1996. **Revision sistemática del género Belostoma Latreille (Hemiptera - Heteroptera)**. Grupos de *Belostoma* (*Belostoma triangulum*, *B. (B.) minor*, *B. (B.) oxyurum*, *B. (B.) plebejum* y *B. (B.) denticolle*). La Plata: Tese de Doutorado, não publicada, Facultad de Ciencias Naturales y Museo, Universidad Nacional de La Plata. vi, 117p., 16 pr.
- ESTÉVEZ, A.L. & POLHEMUS, J.T., 2001. The small species of *Belostoma* (Heteroptera, Belostomatidae). 1. Key to species groups and a revision of the *denticolle* group. **Iheringia, Série Zoologia**, Porto Alegre, **91**:151-158.
- HERRICH-SCHÄFFER, G.A.W., 1848. **Die wanzenartigen Insecten**, v.8. Nüremberg: Lotzbeck, J.R. p.28.
- HUNGERFORD, H.B., 1919. Notes on the aquatic Hemiptera. **Kansas University Science Bulletin**, Lawrence, **11**:141-151.
- KIRKALDY, G.W., 1906. A list of the genera of the Pagiopudous (Hemiptera - Heteroptera), with their type species from 1758 to 1904 (and also of the aquatic and semi-aquatic Trochalopoda). **Transactions of the American Entomological Society**, Filadélfia, **32**:151-152.
- KIRKALDY, G.W. & TORRE-BUENO, J.R. DE LA, 1909. A catalogue of American aquatic and semi-aquatic Hemiptera. **Proceedings of the Entomological Society of Washington**, Washington, **10**:190-191.
- LANZER-DE-SOUZA, M.E., 1980. Inventário da distribuição geográfica da família Belostomatidae Leach, 1815 (Hemiptera - Heteroptera) na Região Neotropical. **Iheringia, Série Zoologia**, Porto Alegre, **55**:43-86.
- LANZER-DE-SOUZA, M.E., 1992. Nova espécie do gênero *Belostoma* Latreille, 1807. **Iheringia, Série Zoologia**, Porto Alegre, **72**:147-150.
- LATREILLE, P.A., 1807. **Genera Crustaceorum et Insectorum secundum ordinem naturalem in familias disposita, iconibus exemplisque plurimis explicata**, v.3. Paris e Argentorat: Armand Koenig. 259p.
- LATREILLE, P.A., 1809. **Genera Crustaceorum et Insectorum secundum ordinem naturalem in familias disposita, iconibus exemplisque plurimis explicata**, v.4. Paris e Argentorat: Armand Koenig. 399p.
- LAUCK, D.R., 1962. A monograph of the genus *Belostoma* (Hemiptera), Part I. Introduction to *B. dentatum* and *subspinosum* groups. **Bulletin of the Chicago Academy of Sciences**, Chicago, **11**(3):34-81.
- LAUCK, D.R., 1963. A monograph of the genus *Belostoma* (Hemiptera), Part II. *B. aurivillianum*, *stolli*, *testaceopalidum*, *dilatatum*, and *discretum* groups. **Bulletin of the Chicago Academy of Sciences**, Chicago, **11**(4):82-101.

- LAUCK, D.R., 1964. A monograph of the genus *Belostoma* (Hemiptera) Part. III. *B. triangulum*, *bergi*, *minor*, *bifoveolatum* and *flumineum* groups. **Bulletin of the Chicago Academy of Sciences**, Chicago, **11**(5):102-154.
- LAUCK, D.R. & MENKE, A.S., 1961. The higher classification of the Belostomatidae (Hemiptera). **Annals of the Entomological Society of America**, Columbus, **54**(5):644-657.
- LEIDY, J., 1847. History and anatomy of the hemipterous genus *Belostoma*. **Journal of the Academy of Natural Sciences of Philadelphia**, Philadelphia, **2**(1):57-67.
- LINNAEUS, C., 1758. **Systema Naturae**. v.5. Holmiae: Cura Societatis Zoologicae Germanicae. 824p.
- MAHNER, M., 1993. Systema Cryptoceratororum Phylogeneticum (Insecta, Heteroptera). **Zoologica**, Stuttgart, **48**(143):1-302.
- MAYR, G., 1863. Hemipterogische Studien. Die Belostomiden. **Verhandlungen der zoologisch-botanischen Gesellschaft Wien**, Viena, **13**:339-364.
- MAYR, G., 1871. Die Belostomiden. **Verhandlungen der zoologisch-botanischen Gesellschaft Wien**, Viena, **21**:399-440.
- MENKE, A.S., 1965. A new south american toe biter (Hemiptera - Belostomatidae). **Contributions in Science**, Los Angeles, **89**:2-4.
- MENKE, A.S. & LAUCK, D.R., 1962. The Machris Brazilian Expedition - Entomology: Belostomatidae (Hemiptera). **Contributions in Science**, Los Angeles, **55**:3-8.
- MONTANDON, A.L., 1899. Trois espèces nouvelles du genre *Zaitha*. **Bulletin du Muséum d'Histoire Naturelle**, Paris, **1899**:170-173.
- MONTANDON, A.L., 1903a. Deux nouvelles espèces du genre *Belostoma*... [?]. **Bulletin du Musée d'Histoire Naturelle**, Paris, **9**:21-23.
- MONTANDON, A.L., 1903b. Espèces nouvelles ou peu connues du genre *Belostoma*. Appartenant aux collections du Musée National Hongrois. **Annales Musei Nationalis Hungarici**, Budapest, **1**:359-363.
- MONTANDON, A.L., 1903c. Hémiptères aquatiques, notes synonymiques et géographiques, descriptions d'espèces nouvelles. **Buletinul Societatii române de știinte**, Bucareste, **12**:97-121.
- NIESER, N., 1975. The water bugs (Heteroptera: Nepomorpha) of the Guyana Region. **Studies on the Fauna of Suriname and other Guyanas**, Utrecht, **16**(81):88-128.
- NIESER, N. & MELO, A.L., 1997. **Os heterópteros aquáticos de Minas Gerais. Guia introdutório com chave de identificação para as espécies de Nepomorpha e Gerromorpha**. Belo Horizonte: Ed. UFMG. 180p.
- PIZA-JR., S.T., 1975. Species nova Belostomatidarium brasiliensium. **Revista da Agricultura**, Piracicaba, **50**(1-2):67-68.
- RIBEIRO, J.R.I., 1999. **Revisão das espécies de Belostoma Latreille, 1807 (Insecta: Heteroptera: Belostomatidae) ocorrentes no sudeste do Brasil**. Rio de Janeiro: Dissertação de Mestrado, não publicada, Museu Nacional, Universidade Federal do Rio de Janeiro. xiv, 244p.
- RIBEIRO, J.R.I., 2000. Description of the male of *Belostoma foveolatum* and new records of *B. costalimai* and *B. stollii* (Heteroptera: Belostomatidae). **Entomological News**, Chicago, **111**(3):159-170.
- RIBEIRO, J.R.I., no prelo. A review of the species of *Belostoma* Latreille, 1807 (Insecta, Heteroptera, Belostomatidae) of southeastern Brazil. **Zoosystema**, Paris.
- RIBEIRO, J.R.I.; NESSIMIAN, J.L. & MENDONÇA, E.C., 1998. Aspectos da distribuição dos Nepomorpha (Hemiptera: Heteroptera) em corpos d'água na Restinga de Maricá, Estado do Rio de Janeiro. In: NESSIMIAN, J.L. & CARVALHO, A.L., (Eds.) **Ecologia de insetos aquáticos**. Rio de Janeiro: PPGE-UFRJ. v.5, p.113-128. (Series Oecologia Brasiliensis).
- SCHNACK, J.A., 1973. Clave para determinación de especies argentinas del género *Belostoma* Latreille (Hemiptera: Belostomatidae). **Revista del Museo de La Plata (secc. zoología)**, La Plata, **12**(3):1-10.
- SCHNACK, J.A., 1976. Los Belostomatidae de la República Argentina (Hemiptera). In: RINGUELET, R.A. (Ed.) **Fauna de agua dulce de la República Argentina**. Buenos Aires: FECIC. v.35 (fascículo 1), p.1-66.
- STÅL, C., 1860. Bidrag till Rio Janeiro - Traktens Hemipter-Fauna. **Kungliga Svenska Vetenskapsakademies handlingar**, Estocolmo, **2**(7):1-84.
- STÅL, C., 1865. **Hemiptera africana**, v.3. Holmiae: Officina Norstedtiana. 200p.
- WHITE, F.B., 1879. List of the Hemiptera collected in the Amazons by Professor I.W.H.Trail, M.A., M.D. in the years 1873-1875, with descriptions of new species. Part I. **Transactions of the Royal Entomological Society of London**, Londres, **4**:267-276.